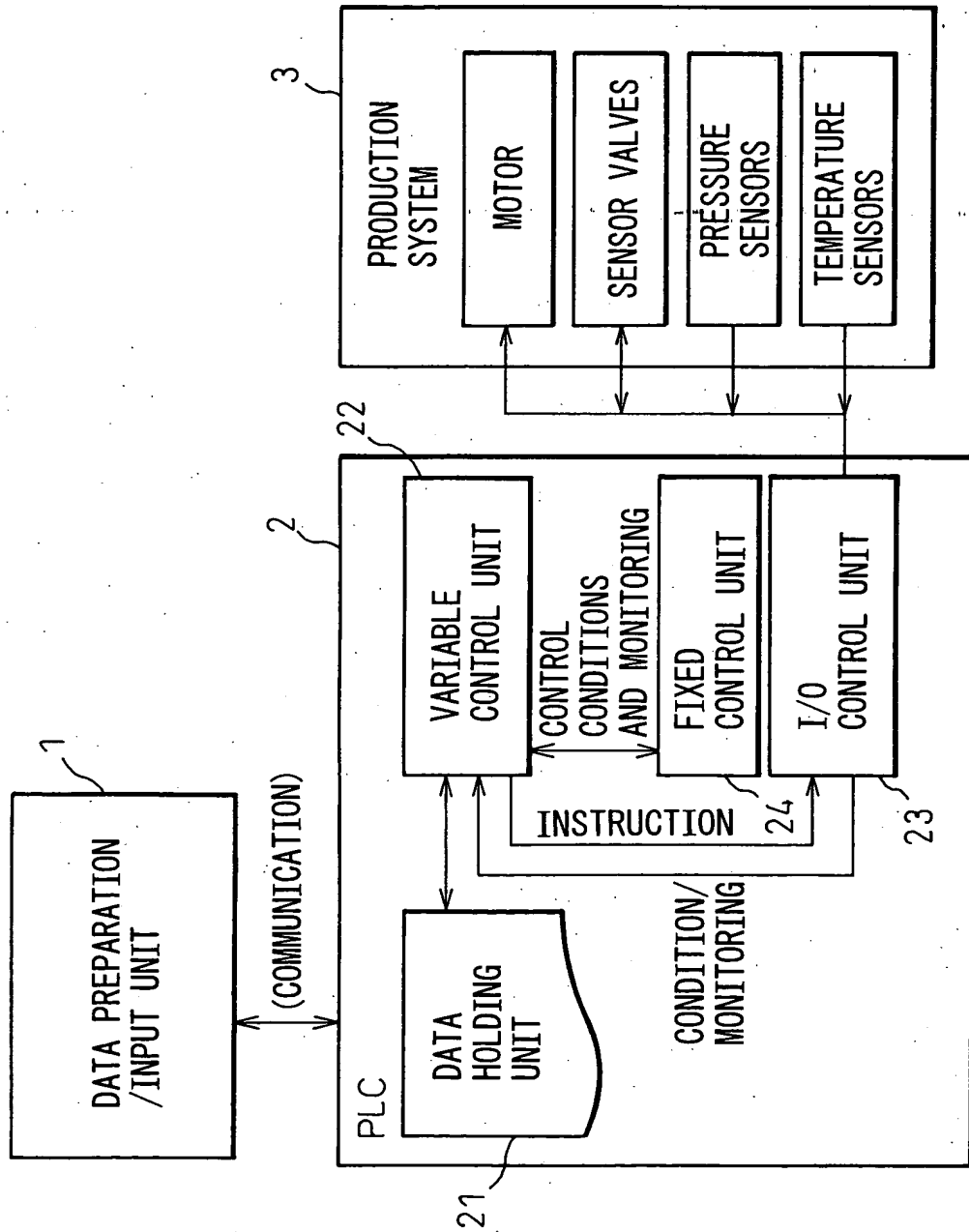


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Fig.1



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Fig. 2

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<u>I/O:1</u>	0	LS	LOADER ADVANCEMENT END	
	1	LS	LOADER RETRACTION END	
	2	LS	LOADER DESCENT END	
	3	LS	LOADER ASCENT END	
	4	LS	WORKPIECE CHUCK END	
	5	LS	WORKPIECE UNCHUCK END	
	6			
	7			
	<u>SL1</u>	8	PH	INPUT WORKPIECE CONFIRMATION
		9	PH	DISCHARGE WORKPIECE CONFIRMATION
		10		
		11		
		12		
		13		
		14	EX	INPUT CONVEYOR OPERATION
		15	EX	DISCHARGE CONVEYOR OPERATION
<u>I/O:2</u>	0	SOL	LOADER ADVANCEMENT	
	1	SOL	LOADER RETRACTION	
	2	SOL	LOADER DESCENT	
	3	SOL	LOADER ASCENT	
	4	SOL	WORKPIECE CHUCK	
	5	SOL	WORKPIECE UNCHUCK	
	6			
	7			
	<u>SL2</u>	8		
		9		
		10		
		11		
		12		
		13		
		14		
		15		

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Fig. 3

PROCESSING STEPS	1	2	3	4	5	6	7	8	~	n
TIME										
LOADER ADVANCEMENT	1									
LOADER RETRACTION					1					
LOADER DESCENT	1					1				
LOADER ASCENT				1				1		
WORKPIECE CHUCK			1							
WORKPIECE UNCHUCK							1			
LOADER ADVANCEMENT END		1								
LOADER RETRACTION END	1					1				
LOADER DESCENT END			1				1			
LOADER ASCENT END	1				1					
WORKPIECE CHUCK END				1						
WORKPIECE UNCHUCK END	1							1		
INPUT WORKPIECE CONFIRMATION	1		1							
DISCHARGE WORKPIECE ABSENCE CONFIRMATION						1				
INPUT CONVEYOR OPERATION	1	1	1	1	1	1	1	1	1	
DISCHARGE CONVEYOR OPERATION	1	1	1	1	1	1	1	1	1	

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Fig. 4

DATA HOLDING UNIT				I/O DATA AREA			
STEP SEQUENCE DATA AREA				OPERATION	CONDITION	MONITOR	
1	4	2		200	101	104	
1	1	2		202	103	105	
1	2	2		204	105	104	
1	1	2		203	114	105	
1	1	2		201	100	104	
1	1	2		202	102	105	
1	1	2		205	108	104	
1	1	2		203	104	105	
					103	104	
					101	105	
					102	104	
					105	105	
						104	
						105	
						104	
						105	

STEP SEQUENCE DATA AREA				OPERATION	CONDITION	MONITOR	
1	4	2		200	101	104	
1	1	2		202	103	105	
1	2	2		204	105	104	
1	1	2		203	114	105	
1	1	2		201	100	104	
1	1	2		202	102	105	
1	1	2		205	108	104	
1	1	2		203	104	105	
					103	104	
					101	105	
					102	104	
					105	105	
						104	
						105	
						104	
						105	

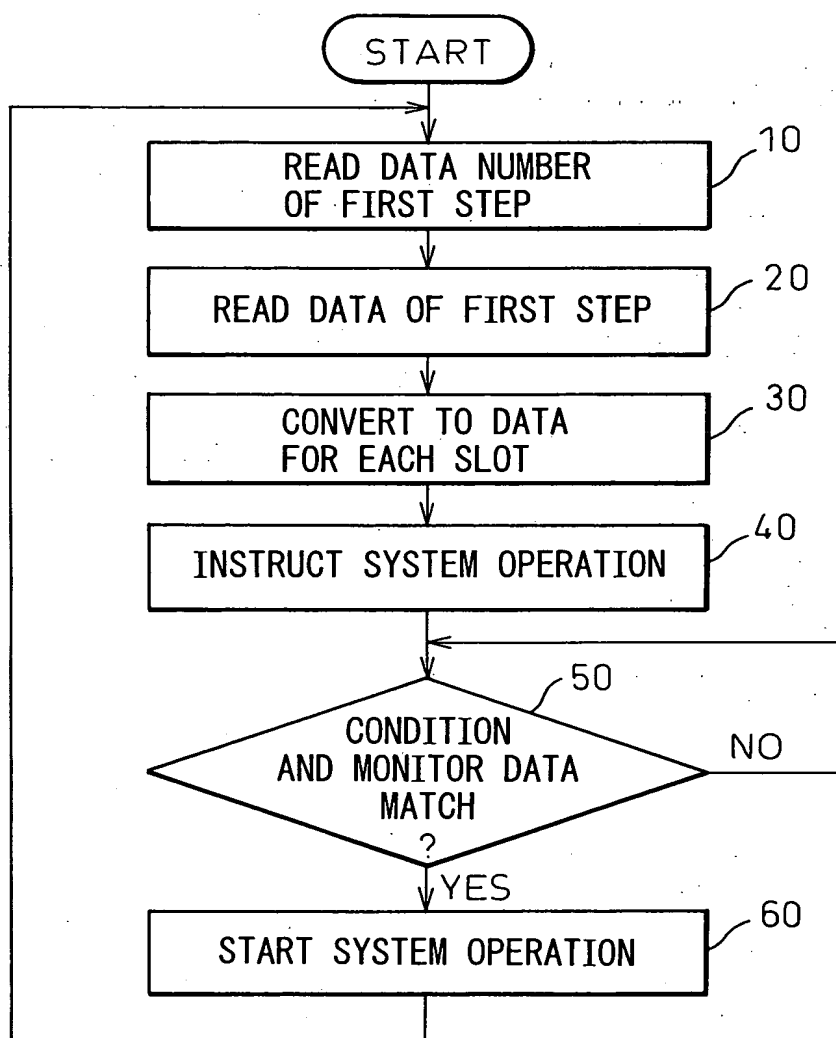
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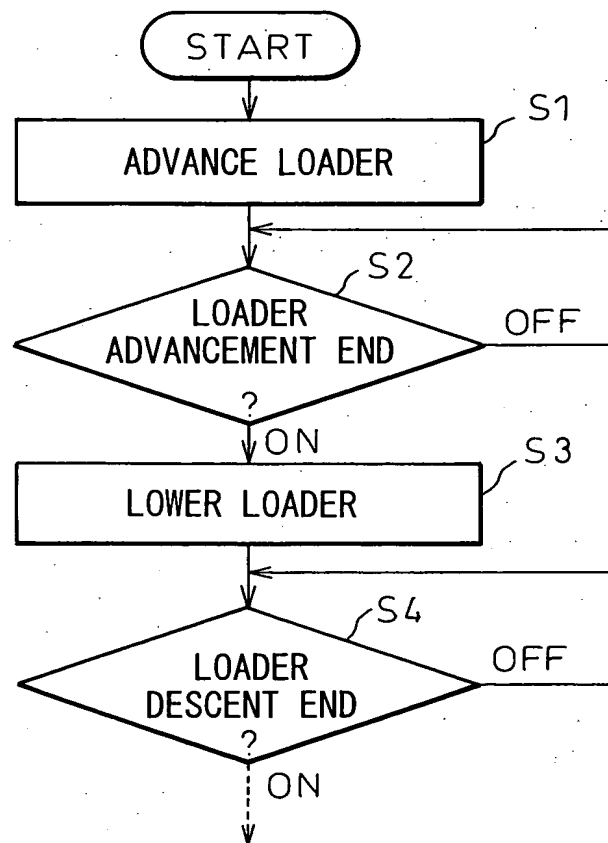
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Fig. 5



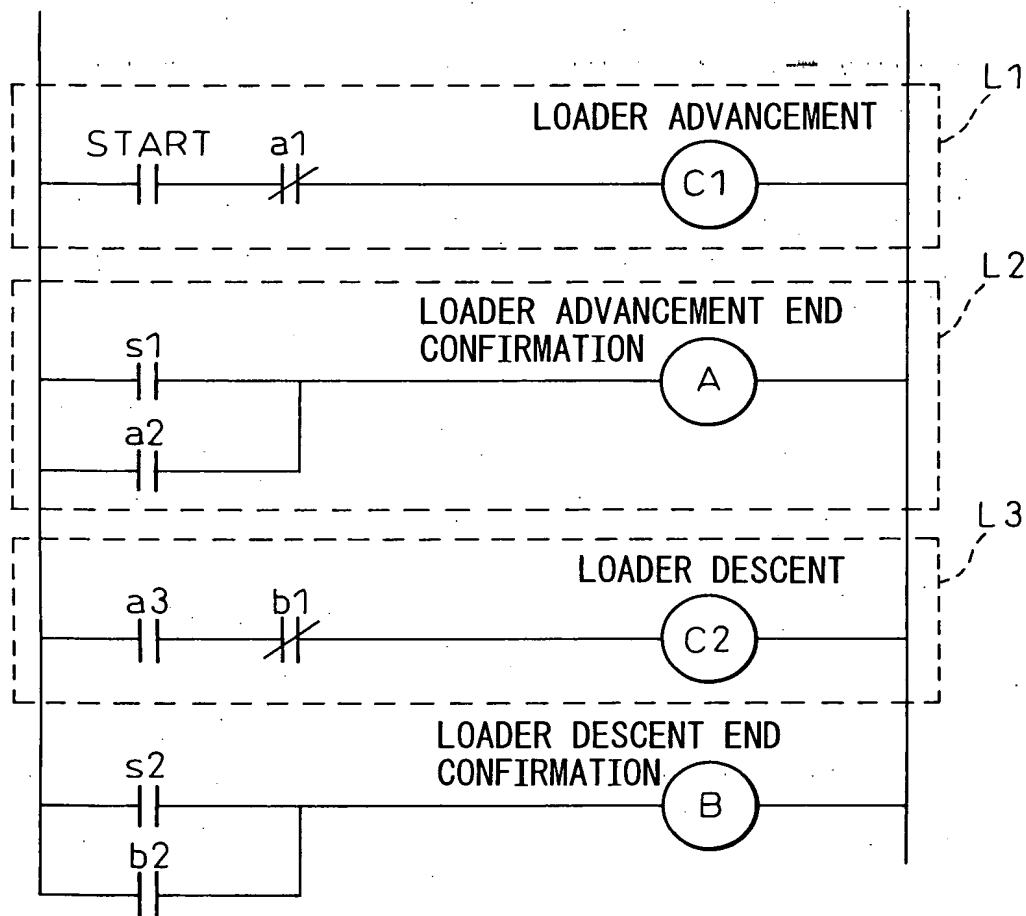
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Fig.6



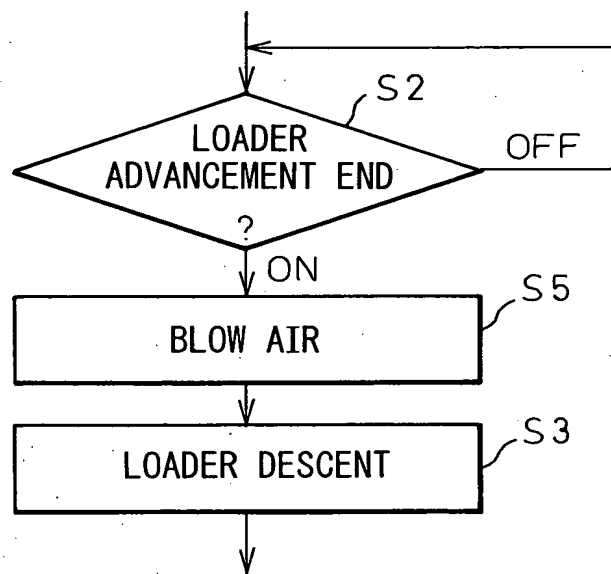
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Fig.7



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Fig. 8



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Fig. 9

